

ABSTRACT

A high throughput, short batch cycle commercial ice making machine produces commercial ice which resists melting in convenient sizes for mobile food carts, market produce, or fish displays. The machine introduces super-cooled water, that is in a liquid state while exposed to a temperature below freezing, into a batch of pre-formed hollow molds of one or more horizontally oriented ice forming freezing trays oriented horizontally. Using vapor compression refrigeration, the machine produces a plurality of supercooled ice segments in pockets within the freezing tray. The supercooled ice segments are rapidly subjected to a short, temporary contact with a high heat source from a sleeve integral with the freezing tray compartments, along a peripheral bottom surface of the ice segment accommodating freezing tray molds. This temporarily melts a bottom surface of each ice segment, lubricating it and loosening it. Then the machine rotates the freezing tray containing the batch of ice segments about its horizontally oriented axis to a vertically oriented dump position, thereby dumping the temporarily heated ice segments into the freezing tray. The ice cubes thus formed may be fresh water, salt water or beverage containing ice cubes.